

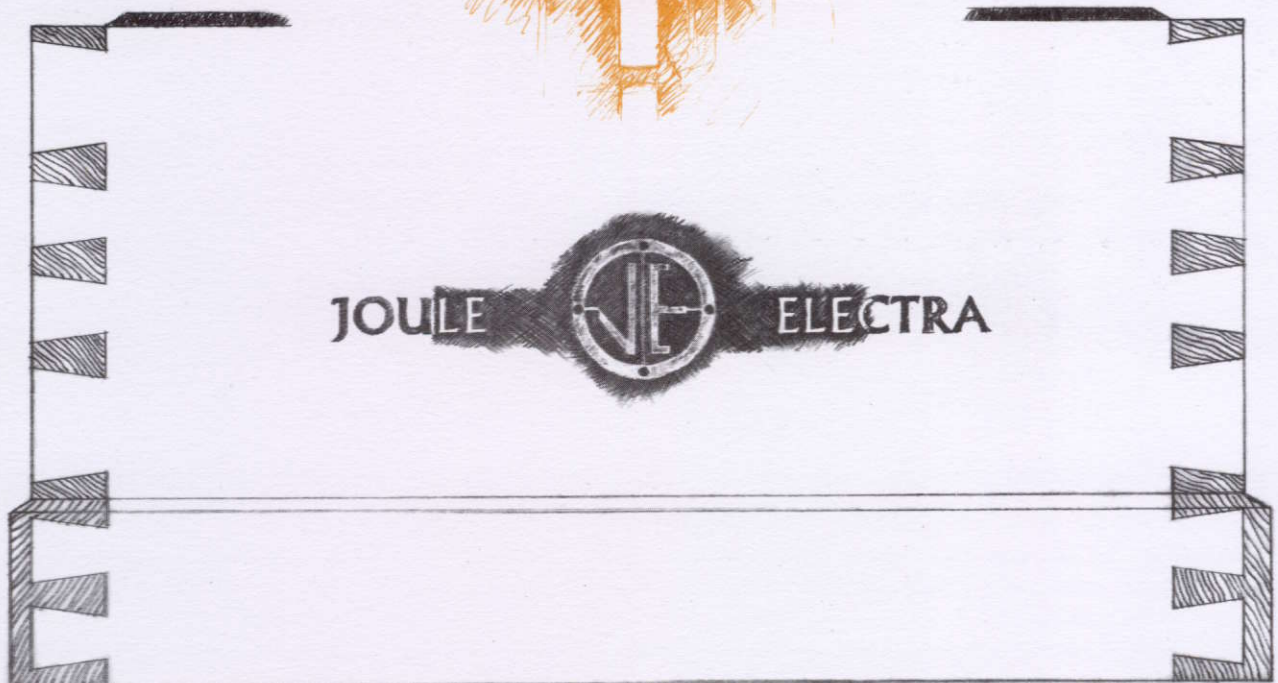
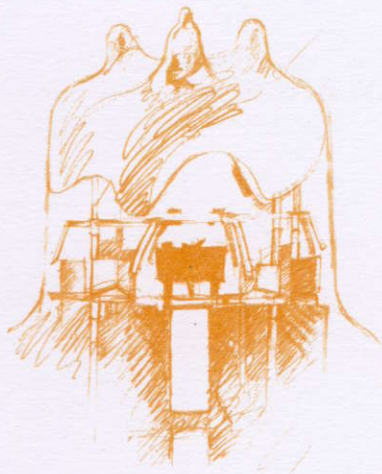
MUSIC

simple

elegant

immediate

infinite



# PREAMPLIFICATION



LA-100 at play.

Joule-Electra preamplifiers are all tube designs, built to reproduce music with harmonic integrity and spatial expression. They succeed because, above all, they are self-effacing. The Joule sonic signature is the musical immersion and involvement it promotes. An uncanny ability to preserve the tonal, spatial and dynamic reality of individual voices and instruments lets music be heard from its individual contributors simultaneously yet remain fully in touch with the whole event. This rare capacity is closer to how music sounds live and allows participation and emotional connection in a much deeper way. This is the result of an imaginatively elegant circuit, optimized parts, unique construction techniques and the hand-built pride that is evident in each unit.

The Joule-Electra Mu follower circuit generates an infinite impedance environment for the tubes, allowing music to pass through a full song effortlessly and coherently. The signal path is purposefully simple and elegant. The Joule implemented Mu follower circuit is the pathway to both the immediate and the infinite. It is in the heart of every Joule-Electra preamplifier, phono stage and power amplifier.

At the core of each Joule-Electra preamp is a precision engineered power supply with tube regulation. The robust power supplies are high-current and capable of 100 joules of energy storage. Natural dynamic authority and true transient speed result from this design and implementation. Music flows quickly, cleanly and coherently with a dimensionality and juiciness of tone that only a Joule can attain.

Joule-Electra preamplifiers come in a variety of configurations, from a true tube line stage, all tube phono stages, and as complete full function preamplifiers. The Joule preamps embody an excellent value because they offer state of the art music reproduction at extremely competitive prices. Below is a basic description of our preamplifiers.

**LA-100 Mk. III Line amplifier (with remote).** Six tube line stage preamplifier that provides exceptional musical performance unmatched anywhere near its price. The LA-100 offers harmonic integrity, spatial dimension and coherence with a beauty of tone that makes it a price to performance triumph. Music lovers only requiring a line stage need to hear how much musical beauty this unit can access. The LA-100 is hand-built with care and pride creating a component that will faithfully and beautifully reproduce music for years to come.

**LA-100 Mk. III Line amplifier with Gold Aero phono board (with remote).**

**OPS-1 Mk. III all tube phono stage with separate power supply.** Volume Control & Remote Volume Control optional at extra cost.

**OPS-2 Mk. III all tube phono stage with separate power supply.**

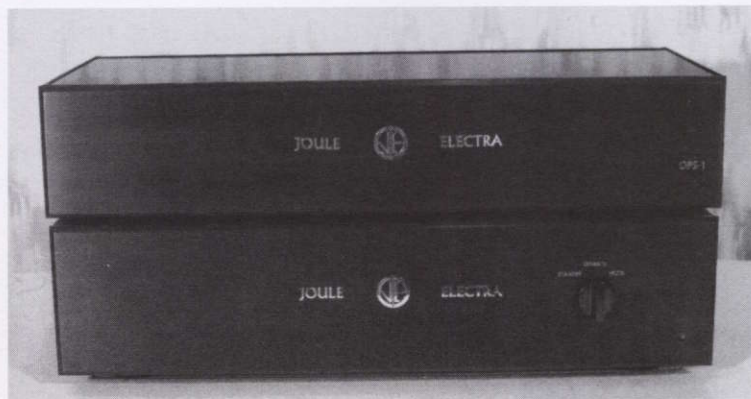
Volume Control & Remote Volume Control optional at extra cost. The OPS-2 is full dual-mono in construction and uses more tubes in its complement, therefore the higher cost.

The OPS-1 & 2 with separate power supplies are complete phono stages offering the committed vinyl enthusiast the platform of choice for playing records. Medium and high gain, for moving magnet or moving coil cartridges, all tube power supplies and the option of a volume control and remote volume control, they can be complete, single function preamplifiers for the ultimate playback of records. They can also be used with a line stage preamplifier. These extraordinary phono preamplifiers are hand-built for a singleness of purpose. If you only play records and you love the music in your record collection, the OPS-1 or 2 with a volume control is the purest path those notes can take.

**LAP-100 Mk. III with internal OPS-1 Mk.III all tube Med/High gain phono stage with separate power supply. (with remote).**

**LAP-100 Mk. III with internal OPS-2 Mk.III all tube Med/High gain phono stage with separate power supply. (with remote).**

The LAP-100's are the ultimate combination and synthesis of the acclaimed LA-100 line stage and the state of the art OPS phono stages. A two-chassis component (preamp and outboard power supply), the LAP's accommodate multiple sources with full control and switching functions. Balance control (out of the signal path), a mono switch, tape loops along with the superb OPS Med/High gain phono stage are all included. The Joule-Electra LAP preamplifiers are true full function components with the musical performance that can only come from a real Joule.



OPS-1 phono stage.

# POWER AMPLIFICATION: THE OTL'S

The Joule-Electra series of OTL power amplifiers are state-of-the-art. They are truly unique amplification devices that handle musical signals with absolute honesty, beauty, and integrity. The Joule-Electra OTL's are alone at the top in their tonal and dimensional purity, yet possess an effortless transient quickness that is startling and completely natural. Free of etch, coloration, exaggeration or hype, the Joules deliver a musical experience closer to the real thing in every meaningful way.

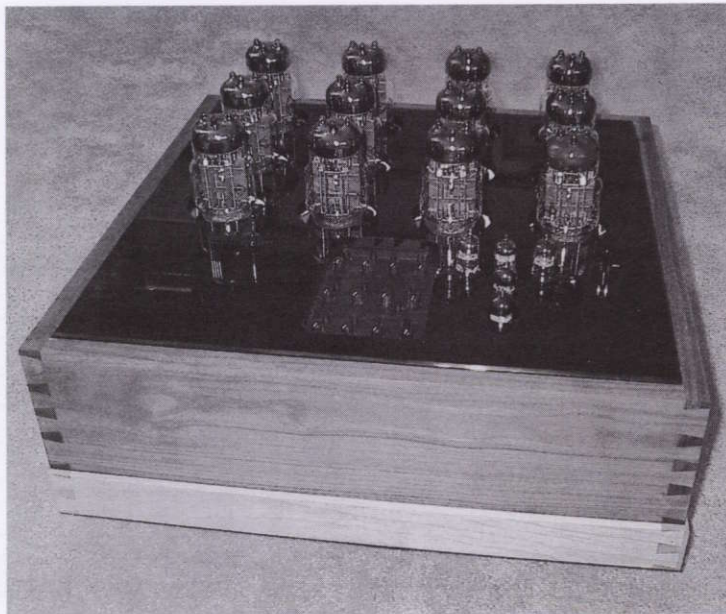
Eliminating the output transformer with its consequent problems and compromises, allows OTL amplifiers to directly couple to the loudspeaker. The direct coupling of the Joules output tube, in this case the incredible 6C33 Russian triode, delivers analog voltage directly to the speaker's voice coil. The resulting amplifier-speaker relationship is tighter, more responsive. The 6C33 is an unusually robust and musical tube with an output impedance that is uncommonly low. It is the ideal OTL output tube, in the right circuit, and the Joule implementation IS the right circuit. Joule OTL's operate as two single-ended amplifiers in one chassis running in parallel. One leg of the signal is inverted at the driver stage and uninverted at the output stage of the amplifier; the other leg remains uninverted. Both legs run differentially, always in full class A (even at full power). Each leg has its own power supply and is paralleled at the output. The popular misconception that phase inversion always compromises the signal is often true in the case of conventional push-pull series coupled output stages (usually transformer coupled). However, the signal remains uncompromised in the Joules because the two legs of the signal are paralleled at the output. The result is transparency, real world power, harmonic fullness and natural, lifelike dynamics – revealed clearly after one brief listening session.

The Joule-Electra OTL amplifier uses unique chassis construction methods and materials. The amplifier chassis are wood. (Either highest grade plywood which is then covered or select hard and soft solid woods featuring dovetail joinery). Perceptive listeners will revel in the complete absence of metallic artifacts. No ringing, pinging or "zippy" aftertaste from these amps. The ingenious wood chassis is a musically sympathetic structure that is part of the Joule's way with the natural harmonic density and integrity of the music. Again, proof positive, the road less traveled is often most rewarding.

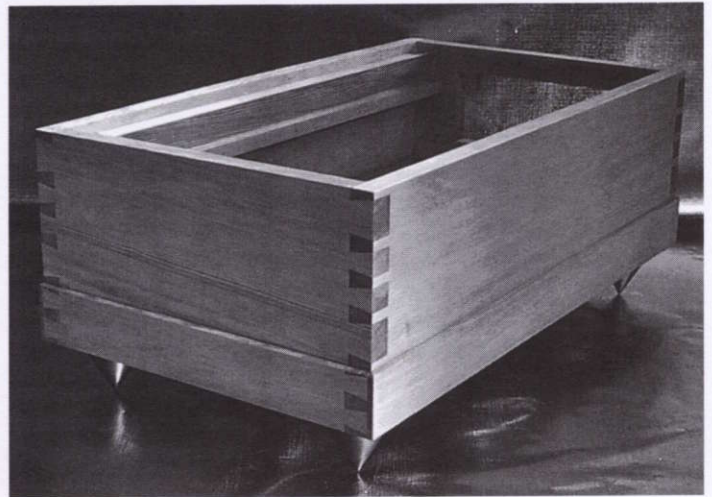
Joule OTL's include a variac as part of its power supply. This device allows the amps to float with respect to the radical variation in power in different parts of the country. The variac optimizes the line voltage the amps see, to allow precise biasing of each tube. This means the amps always receive the correct amount of voltage for optimum musical playback.

The OTL's come in four power ratings, allowing a precise match of an amplifier to the speaker and room requirements. There is no sonic or musical penalty in using a higher powered version as the Joule-Electra "big" amplifiers don't give up any of the speed, agility and grace that the small amps possess.

**VZN-80 (EMERALD)** Stereo amplifier with outboard power supply. 80 watts per channel into 8 Ohms, 50 into 4 ohms. Our entry level, hand-built, OTL. Ideal for smaller rooms and reasonably efficient speakers where it will provide musical veracity and delight for a lifetime of listening.



*Right of Passage (woodie)*



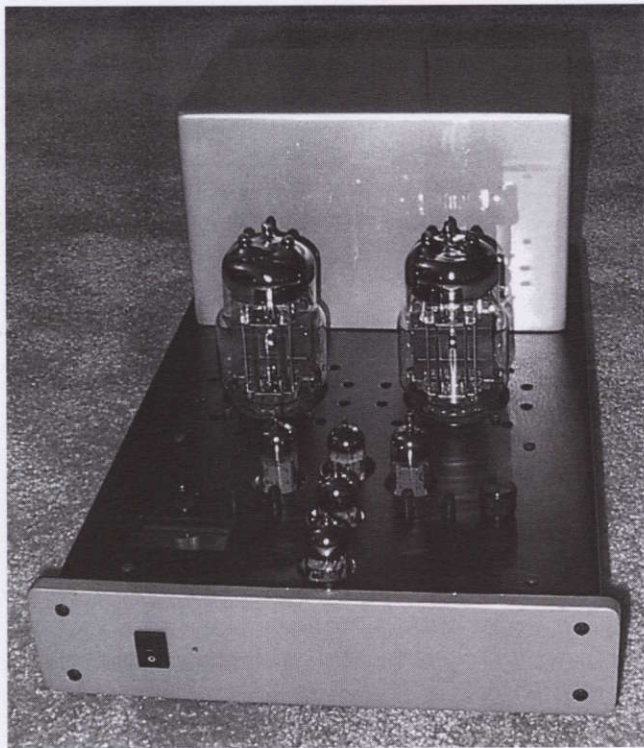
*VZN-100 Chassis in Sitka Spruce*

**VZN-100 (MARQUIS)** Monobloc amplifiers with outboard power supply. 100 watts per channel into 8 ohms, 70 into 4 ohms. The original core design and a beautiful 100 watt amplifier that delivers astonishing musical punch. Moderate size systems and rooms benefit greatly from the high resolution, harmonically, full Marquis monoblocs.

**VZN-160 (GRAND MARQUIS)** Monobloc amplifiers with inboard power supply. 160 watts per channel in 8 ohms, 100 into 4 ohms. Moderate to large systems or loudspeakers that are tougher loads, are the Grand Marquis forte. More than ample power for the vast majority of systems, but the extra power is uncompromised in musical refinement.

**VZN-220 (RITE OF PASSAGE)** Monobloc amplifiers with inboard power supply. 225 watts per channel into 8 ohms, 140 into 4 ohms. Harmonic thunder in a bottle. For large systems and/or hard to drive loudspeakers, these amplifiers will deliver the musical goods unlike any other large amplifier. A big powerful package of speed, control and finesse that is unmatched, period. If your system and room are capable of this level of performance, these amplifiers are the stuff of legends.

# STARGATE



*Stargate - 40 wpc at 4 & 8 ohms*

The Stargate represents another breakthrough for Joule-Electra. It is an elegant transformer coupled push-pull amplifier capable of astonishing musical performance. The key to its spectacular performance as a conventional transformer coupled amp is the circuit topology. It is identical in every detail to the VZN series of OTL's with only the addition of the output transformer to couple to the load. Why would Joule bother to create this kind of amplifier? The driving force was to enable the serious audiophile to obtain a classic design and superb performance at a lower cost than the OTL's.

The transformer allows just two of the wonderful 6C33's to drive a conventional speaker with ease. With a drive capability of 40 watts into 4 and 8 ohms, it is more than capable of delivering a musical performance that is rivaled only by our OTL's in the average size living room.

The Stargates, largely because of their massive transformers, weigh in at over 50 pounds a piece. They are biased full class A and feature the magnificent 6C33 Russian triode.

Other versions of this amp will be offered later this year. We will build a lower powered single ended version for use with the high efficiency speakers now available. An OTL version will be available mid-summer to power higher impedance horns a la Avantgarde and others. Both of these new amps will be breakthroughs for high efficiency speaker aficionados.

The Joule-Electra VAMP is a hybrid amplifier that delivers a major portion of the Joule-Electra sound without the care and feeding requirements of the all tube components. The Joule circuit topology is implemented uniquely creating a single ended hybrid amplifier. The LA-100 gain stage and Mu follower are employed using tubes as the driver stage coupled to Hitachi high power mosfets at the output. The VAMP effortlessly delivers music with timbral accuracy, tonal richness, and



*VAMP - 250 wpc Power Amplifier*

musical detail. And VAMPs can be played for hours on end without listener fatigue.

The integrated VAMP offers remote control, multiple inputs (2 kinds of phono stages are in the works) and delivers 150 watts into 8 ohms. Other options will become available for the integrated version as formats and possible new requirements unfold. The VAMP is also available as a power amplifier in two models: one producing 150 watts into 8 ohms, the other producing 250 watts into 8 ohms. Each is authoritative in drive and tonal finesse. The VAMP's are for the discerning owner who wants the convenience and simplicity of solid state, but who needs music with tubes in the heart and soul of it.

## VAMP



*VAMP - Integrated*



T e l 8 0 3 - 2 7 9 - 6 9 5 9

[www.joule-electra.com](http://www.joule-electra.com)

1 0 3 L a r k L a n e , N o r t h A u g u s t a , S C 2 9 8 6 0